Design Guide: Band Training Facilities

March 1983 TABLE OF CONTENTS

Table of Contents

		page
Chapt	er 1: Introduction	
1-1 1-2 1-3 1-4 1-5	Using This Chapter Purpose Scope Organization Responsibilities A. Project Planning and Programming B. Design	1-1 1-1 1-2 1-2 1-2 1-3 1-4
1-6 1-7	References Glossary	1-5 1-5
Chapt	er 2: Architectural Programming	
2-1 2-2 2-3	Using This Chapter Programming Process Functions Program A. Overall Functions B. Specific Functions	2-1 2-1 2-3 2-3 2-3
2-4 2-5	Space Program Site and Building Selection A. Site Evaluation Criteria B. Building Suitability Criteria	2-6 2-6 2-7 2-10
Chapt	er 3: General Design Considerations	
3-1 3-2 3-3 3-4 3-5	Using This Chapter Site Design Overall Building Design Space Relationships Acoustical Considerations A. Sound Isolation B. Noise Control C. Room Acoustics Environmental Systems Design	3-1 3-3 3-5 3-10 3-10 3-13 3-13
	ter 4: Space Criteria	
4-1 4-2 4-3 4-4 4-5 4-6 4-7 4-8	Using This Chapter Main Rehearsal Room Group Practice Rooms Individual Practice Rooms Recording/Audio Control Booth Library Offices Individual Instrument Lockers/	4-1 4-2 4-4 4-5 4-8 4-9 4-9
4-9	Instrument Cleaning Day Area	4-10 4-14
4-10 4-11 4-12 4-13 4-14	Toilets/Lockers/Showers Unit Supply/Storage/Instrument Repair Lobby and Circulation Maintenance and Mechanical Spaces Arms Room	4-14 4-16 4-17 4-19 4-19
4-15 4-16	Mail Room Outdoor Spaces	4-19 4-20

TABLE OF CONTENTS March 1983

Chapte	er 5: Practical Approaches For Acoustic Construction	
5-1	Using This Chapter	5-1
5-2	Sound Isolation	5-1
	A. Individual Practice Rooms	5-2
	B. Small Group Practice Rooms	5-9
	C. Main Rehearsal Room,	
	Large Group Practice Room and	
	Control/Recording Booth	5-12
	D. Doors	5-14
	E. Windows	5-19
	F. Lighting and Electrical Systems	5-20
5-3	Noise Control and Mechanical	
	Systems	5-20
5-4	Room Acoustics	5-22
	A. Absorptive Finishes	5-22
	B. Room Shape	5-24
	C. Main Rehearsal Room	5-24
	D. Group Practice Rooms	5-25
	E. Individual Practice Rooms	5-25
Chapt	er 6: Illustrative Designs	
6-1	Using This Chapter	6-1
6-2	New 45 Person Band Facility	6-2
6-3	New 65 Person Band Facility	6-6
6-4	Renovation of 6,150 SF Battalion	
	Headquarters, with Additions	6-10
6-5	Renovation of 12,700 SF Enlisted	
	Men's Service Club	6-14

March 1983 LIST OF FIGURES

Lis	t of Figures	page
Chapt	er 1: Introduction	
1-1	Band Training Facilities Project	4.0
1-2	Development Process Recently Constructed Army Band	1-3
1-2	Facility	1-4
Chapt	ter 2: Architectural Programming	
2-1	Space Programming Process	2-2
2-2	Band Rehearsal (The U.S. Army	
	Band and Chorus; Brucker Hall, Ft. Myer, Va.)	2-4
2-3	Small Group Practice	2-5
2-4	Audio Control and Recording	2-5
2-5	Music Library (Brucker Hall)	2-5
2-6	Band Administration	2-5
2-7 2-8	Individual Instrument Storage	2-6 2-6
2-0 2-9	Large Instrument Storage Outdoor Performance	2-6 2-7
2-10	Spaces and Relationships for Army	
	Band Training Facilities	2-9
2-11	Site Evaluation Criteria	2-10
2-12	Band Training Facility within	0.44
2-13	Renovated Existing Building Band Training Facility in Renovated	2-11
2-13	Existing Building plus Additions	2-11
Ob	0 01	
	er 3: General Design Considerations	
3-1 3-2	Site Zoning Outdoor Performance Area	3-2 3-2
3-2	Access Separation	3-2
3-4	Band Image	3-4
3-5	Ample and Clear Circulation	3-5
3-6	Example Renovation Design	3-6
3-7	Single Story Facility	3-7
3-8 3-9	Public and Private Zones Use Sequences and Building	3-8
3-3	Relationships	3-9
3-10	Supervision Relationships	3-10
3-11	Space-to-Space Relationships	3-11
3-12	Independent Construction for Sound	
2 12	Isolation Magnifestured Sound Medule	3-12
3-13 3-14	Manufactured Sound Module Ductwork Design to Reduce Sound	3-13
0 14	Transmission	3-13
3-15		3-14
3-16	Elimination of Flutter with a Splayed	
	Wall	3-15
Chapt	er 4: Space Criteria	
4-1	Illustrative Main Rehearsal Rooms	4-2
4-2	Illustrative Large Group Practice	
4.0	Rooms	4-5
4-3	Illustrative Small Group Practice Rooms	4-6
4-4	Illustrative Individual Practice Rooms	4-6
4-5	Illustrative Recording/Audio Control	
	Booth	4-8
4-6	Illustrative Library Plan	4-9

LIST OF FIGURES	March 1983

4-7	Illustrative Office Plans	4-10
4-8	Illustrative Individual Instrument Locker System	4-12
4-9	Illustrative Modular Individual	1 12
	Instrument Locker System	4-13
4-10	Illustrative Day Area Plan	4-14
4-11	Illustrative Toilet/Lockers/Shower Plan	4-15
4-12	Illustrative Unit Supply/Storage/ Instrument Repair Plan	4-17
4-13	Illustrative Circulation System Plans	4-18
4-14	Illustrative Loading Dock/Performance	
	Area	4-20
4-15	Illustrative Entry Court	4-21
4-16	Illustrative Patio	4-21
	er 5: Practical Approaches For Acoustic	
	ruction	
5-1	Section Through Typical Individual Practice Rooms	5-3
5-2	Minimum Wall Construction Required	0 0
-	Between Individual Practice Rooms	5-4
5-3	Gypsum Wallboard Construction	
	Between Two Individual Practice	5 4
- A	Rooms (not recommended)	5-4 5-5
5-4 5-5	Party Wall and Corridor Wall Meeting Masonry Wall and Concrete Plank	3-3
J-J	Roof	5-5
5-6	Joints Between Masonry Walls and	
	Metal Roof Decks	5-6
5-7	Isolating Music Rooms Under A Metal	
	Roof Deck Without Concrete Topping	5-7
5-8	Resiliently Attached Gypsum Wallboard	
	Skins to Improve Performance of Single Masonry Walls	5-9
5-9	Resiliently Furred Construction	5-10
5-10	Tieless Double Masonry Wall	5-12
5-11	Section Through a Typical Large	
	Group Practice, Recording and Main	5.40
5 40	Rehearsal Room Complex	5-13 5-14
5-12 5-13	Sound Lock-Overhead Plan View Plan of Music Room Double Doors	5-14
5-14	Double Doors Meeting at Astragal	5-16
5-15	Acoustical Door Frames and Seals	5-17
5-16	Acoustical Door Bottom Seals	5-18
5-17	Window Frame Details-Alternative	
	Methods of Constructing Double	E 10
5-18	Glazed Windows for Sound Isolation	5-19
5-16	Light Fixture Hanger Rod Passing Through a Resilient Ceiling	5-20
5-19	Duct Penetrations in Sound-Isolating	0 _0
	Construction	5-21
5-20	Diagonal Corner Construction for Low-	
F 0.1	Frequency Absorption	5-22
5-21	Room Acoustics in Main Rehearsal Room	5-24
5-22	Absorption and Room Shape to Treat	5-24
0 22	Acoustical Problems	5-25

TABLES March 1983

List of Tables		page
Chapt 2-1	er 2: Architectural Programming Recommended Space Allocations for Army Band Training Facilities	2-8
Chapt	er 3: General Design Considerations Recommended Sound Isolation	2.0
0 1	Criteria for Band Training Facilities	3-12
Chapt	er 4: Space Criteria	
4-1	Typical Modular Instrument Storage System for 45 Person Band	4-13
4-2	Recommended Toilet/Shower Fixture Counts	4-16
	ter 5: Practical Approaches For Acoustic ruction	
5-1	Typical Performance Ranges of Sound Isolating Constructions	5-2
5-2	Suggested Minimum Wall Separation Constructions	5-8
5-3	Recommended Ceiling Treatment	5-11
5-4	Approximate Acoustical Absorptivity of Room Finishes and Treatments	5-23
Chap	ter 6: Illustrative Designs	
6-1	Space Allocations: New 45 Person Band Training Facility	6-2
6-2	Space Allocations: New 65 Person Band Training Facility	6-6
6-3	Space Allocations: Renovation of	
	6150 SF Battalion Headquarters for 45 Person Band Training Facility	6-12
6-4	Space Allocations: Renovation of 12,700 SF EM Service Club for 45 Person Band Training Facility	6-15

DG-1110-3-119

Design Guide: Band Training Facilities

March 1983 LIST OF FIGURES

Chap	oter 6: Illustrative Designs	
6-1	New 45 Person Band Facility-	
	Perspective Sketch	6-3
6-2	New 45 Person Band Facility-	
	Building Plan	6-3
6-3	New 45 Person Band Facility-	0.4
	Site Plan	6-4
6-4	New 65 Person Band Facility-	0.7
C F	Perspective Sketch	6-7
6-5	New 65 Person Band Facility-	6.7
6-6	Building Plan	6-7
0-0	New 65 Person Band Facility- Site Plan	6-8
6-7	Existing 6,150 SF Battalion	0.0
0 1	Headquarters-Plan	6-10
6-8	Renovation of 6,150 SF Battalion	0.0
	Headquarters-Perspective Sketch	6-11
6-9	Renovation of 6,150 SF Battalion	
	Headquarters-Proposed Plan	6-11
6-10	Renovation of 6,150 SF Battalion	
	Headquarters-Site Plan	6-11
6-11	Existing 12,700 SF Enlisted Men's	
	Service Club-Plan	6-14
6-12	•	0.45
	Club-Proposed Plan	6-15
6-13	,	0.40
	Club-Site Plan	6-16